

SCAMPER

(substitute, combine, adapt, modify, put to other uses, eliminate, rearrange)

SCAMPER

Divergent Spark Plug

"The best way to have good ideas is to have lots of ideas."

LINUS PAULING

"The important thing is not to stop questioning."

ALBERT EINSTEIN

*Experience has shown that the best ideas are most often found among the last 33 percent of the ideas generated. That's why it's important to stretch people's thinking and generate lots of ideas. Alex Osborn, in his breakthrough book, *Applied Imagination*, developed a series of questions that spark ideas during divergence. Bob Eberle categorized these questions in his book *Scamper: Games for Imagination Development*, and created the mnemonic SCAMPER to make them easier to remember.*

Substitute
Combine
Adapt
Modify
Put to other uses
Eliminate
Rearrange



(See next page for questions.)

SCAMPER Questions

To generate more ideas while brainstorming, ask the following questions in any order. Repeat the questions as necessary, but don't overwhelm yourself or the group by reading them in rapid succession. Take time to think and respond.

Substitute

What can you substitute?
 What else can you use instead?
 Who else can be included instead?
 What other group can be included?
 What other process can be used instead?
 What other material can be used instead?

Combine

What can be combined?
 How about a blend?
 What sort of ensemble could be used or created?
 How can you combine parts?
 How can you combine purposes?
 How can you combine applications?
 How can you combine materials?

Adapt

What other thoughts does this suggest?
 What else is like this?
 Does the past offer a similar situation?

Modify

How about a new twist?
 How can you change the meaning?
 How can you change the color or shape?
 How about the sound?
 What can you add?
 How can you increase the height?
 How can you increase the weight?

How can you add strength?
 How can you increase frequency?
 How can you increase value?
 What can you subtract?
 What can you shrink?
 What can you streamline?
 What can you understate?
 How can you reduce the size?
 How can you reduce the weight?

Put to other uses

What else can it be used for, as is?
 What might other uses be, if changed?
 What other markets might be interested?

Eliminate

What can you get rid of or omit?
 What can you do without?
 What can you sacrifice?
 What can you give away?

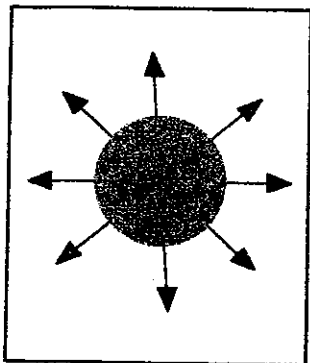
Rearrange

What other patterns might work?
 What other arrangements could be used?
 What other layout might work?
 What can you interchange?
 What can you transpose?
 What can you reconnect?
 What if you reversed it?
 What if you turned it upside down?
 What if you turned it inside out?

SCAMPER

	Substitute	Combine	Adapt
Modify	Put to Other Uses	Eliminate	Rearrange

SCAMPER



Overview, Description, and Purpose

SCAMPER is a tool for generating options. It is an example of a tool that uses a checklist, in the form of an acronym. The letters of the acronym are used to remind you of words and questions that will spur the imagination and evoke a variety of new and varied options. The letters represent the following words: S–Substitute; C–Combine; A–Adapt; M–

Modify, Magnify, Minify; P–Put to other uses; E–Eliminate; R–Reverse or Rearrange. Each of the words associated with the letters suggests a number of questions that can support the word and trigger the flow of options. These questions often help to open up a wide range of possibilities.

The SCAMPER tool is useful when you:

- Need to change direction in an idea generating session;
- Want to encourage the group to consider new and varied perspectives;
- Are looking for breakthrough ideas;
- Need to speed up the pace of idea generation;
- Want to stretch the group's thinking and help the group move away from their assumptions and past experience with the task or topic area.

Getting Ready to Use SCAMPER

Materials. When using this tool, it will be helpful to have: a large sheet of flip chart paper with the SCAMPER acronym and the associated words; the Tool Chart that accompanies this Guide; a list of the questions for each SCAMPER word ready to use; and, a SCAMPER worksheet as a handout for each participant. A sample worksheet is included on page three of this Guide; similar forms will be found in Treffinger (1994) and Isaksen, Dorval, and Treffinger (1994).

Preparation. Review the SCAMPER words and the questions associated with them. Osborn's (1953) Idea Spurring Questions would be excellent background reading.

History and Background

Osborn (1953) presented an extensive list of "idea spurring" questions and discussed their potential uses in stimulating new ideas. Eberle (1971) selected a number of the questions from Osborn's list that he considered particularly evocative (or provocative) and formed the key words for them into the acronym, SCAMPER. Eberle also published two books of "story-telling" games for developing imagination, which were based on applications of the SCAMPER tool. These books have subsequently been reprinted (Eberle, 1996a, 1996b). Although Eberle brought widespread popularity to the acronym SCAMPER, Osborn's original list is considerably more extensive, and might readily be used to generate other useful acronyms and check lists.

Learning More About the SCAMPER Tool

The following sources will help you learn more about this tool:

- Creative Problem Solving Group-Buffalo. (1995). *Using the SCAMPER tool*. Williamsville, NY: Author.
- Eberle, R. F. (1971). *SCAMPER*. Buffalo, NY: D.O.K.
- Eberle, R. F. (1996a). *SCAMPER*. Waco, TX: Prufrock Press.
- Eberle, R. F. (1996b). *SCAMPER On*. Waco, TX: Prufrock Press.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1994) *Creative approaches to problem solving*. Dubuque, IA: Kendall-Hunt.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1998). *Toolbox for creative problem solving: Basic tools and resources*. Williamsville, NY: Creative Problem Solving Group-Buffalo.
- Meador, K. (1996). SCAMPER: Putting fun into idea generation. *Think Magazine*, 7 (2), 15 - 17.
- Osborn, A. F. (1953). *Applied Imagination..* New York, NY: Scribner's.
- Reid, D. (1996). Scamper. *Think Magazine*, 7 (2), 17.
- Treffinger, D. J. (1994). *Creative problem solver's guidebook*. (Rev. Ed.). Sarasota, FL: Center for Creative Learning.
- Treffinger, D. J. (1996). *Guidelines for using thinking tools to generate options* (Poster). Sarasota, FL: Center for Creative Learning.

For additional information on Creative Problem Solving methods and tools, contact:

The Center for Creative Learning, Inc.

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Examples and Applications

Some ways to use the SCAMPER tool with students include generating many, varied or unusual possibilities for:

- Varying the climate factors in a specified geographic area, to help students understand the process of "adaptation" or change;
- Exploring possible variations of an initial research question or hypothesis for a class or team project or Science Fair project;
- Considering possible variations in character, setting, costume, or plot to modify or develop a story, theme, or drama;
- Varying colors, media, methods, and materials to develop original art products;
- Preparing people to function effectively in different physical or social environments from those they are accustomed to (e.g., preparing to live in a tropical or Arctic climate, or preparing for a trip to a different culture);
- Applying knowledge in chemistry and physics to dealing with real issues or challenges in any area (e.g., transportation, communication, food and dining);
- Exploring possible alternative methods for solving math problems;
- Using both familiar musical instruments and a variety of other ordinary objects to produce many, varied, and unusual musical sounds, melodies, or harmonies;
- Studying the effects of variations in media (e.g., light, sound, color) on peoples' mood, behavior, or responses to specific situations;
- Exploring a variety of different ways to present or share what an individual (or group) has learned in a project or assignment;
- Developing alternative ways to communicate ideas or views persuasively;
- Designing a new or modified governmental organization or structure to meet the needs of society in the year 2050;
- Planning to improve a classroom, school, or personal study or living area.

One group of students, working on a unit on inventing and inventions, chose to study the telephone. They used the SCAMPER tool to identify many, varied, and unusual ways the telephone might be modified and improved. Then, they searched through many stores and catalogs, located examples of modifications and extensions of the basic idea of the telephone, and considered what SCAMPER words and questions might have led to those modifications. They concluded their project by identifying new changes and developments that might be produced in the future.

SCAMPER can also be applied to predicting and forecasting activities. For example in a unit on the community, children might use SCAMPER to explore how the fire engine of the future might change, new ways to dispose of household trash, or how homes or stores of the future might differ from today's. In a career-related unit, students might use SCAMPER to explore ways that various kinds of jobs or work might change. Students might also use the SCAMPER tool to design the school or curriculum of the future.

Tips and Variations

General Tips and Suggestions. These suggestions may help you to use the SCAMPER tool successfully.

1. When introducing the tool to a group, it can be helpful to use examples involving improvement of, or alternate uses for, familiar or everyday objects. Such examples are easy to deal with, and they stimulate playful thinking and "warm up" (e.g., "How to improve a brown paper bag?").
2. It is not necessary to use the letters and words in the same order that they appear in the word SCAMPER.
3. You do not have to use all the letters and words.
4. Be sensitive to the group's reaction to a particular letter and word. If you spend too much time on a particular letter or word the tool's effectiveness will be reduced.
5. Feel free to build upon, or refine and develop further, any of the possibilities that have been generated using the SCAMPER words.
6. Try using the SCAMPER tool yourself until you feel comfortable with it.
7. As you apply the tool, think about other words or probing questions for the words that might stimulate new options or different perspectives, based on the specific task or as prompted by some of the possibilities the group has already generated. Some of the possibilities might "trigger" new words—and new options!

Variations. The SCAMPER tool can easily be modified in a variety of ways.

1. Write the SCAMPER words on 5"x 8" cards. Allow group members to choose and swap cards to generate options for the challenge or task.
2. Use the SCAMPER questions to help turn negatives into more positive or constructive possibilities.
3. The SCAMPER tool can be used in analyzing or resolving conflicts.
4. Playing around with new words for each letter can be fun—and productive. (e.g., instead of "Reverse," R might also represent *Rotate*, *Revive*, or *Revolve*).
5. You might also use other words than SCAMPER as acronyms for check-listing. For example, consider the word CREATIVE as an acronym (C -Connect, R - Replace, E - Exchange, A - Adjust, T - Twist, I - Invert, V - Visualize, E - Extend).

Probing Questions for the SCAMPER Tool

Substitute: *What might you substitute?* Who else? What else? Where else? What other parts? What other material? What other place?

Combine: *What might you combine this object with?* Can you combine ideas, objects, or functions? What might this also include or do?

Adapt: *What might you change or do differently?* What else is this like? What else does this remind you of? What might you copy?

Modify, Magnify, Minify: *How might it change if it were bigger or smaller?* What might you increase or reduce? How might you enhance or diminish attributes: color, texture, sound, taste, smell, speed?

Put to other uses: *Are there other uses for this object?* What properties suggest another way to use this? What happens if you change context or purpose?

Eliminate: *Is there something you might eliminate?* What might you do without? What might you remove?

Reverse or Rearrange: *What might you reverse? How might you reorder this?* What if you turned it upside down? backwards? inside out? What if places or roles were reversed? What if you were to rearrange any parts, timing, objectives?

Task or Challenge Statement: _____ _____			
Substitute?	Combine?	Adapt?	Modify (Magnify/Minify)?
Put to Other Uses?	Eliminate?	Reverse or Rearrange?	

Important Reminders For Using All Generating Tools!

When using any of the tools for generating options, keep these suggestions in mind:

- Review the basic guidelines for generating options (defer judgment; seek quantity; encourage all ideas; seek combination) and, if possible, display a poster to help the group remember the guidelines during the session.
- State the task clearly and concisely, and in a way that will invite many, varied, and original options.
- Consider and discuss your reasons or purposes for selecting and using the tool before you begin; know what you hope to accomplish by using the tool.
- Be aware of your thinking and progress while you are applying the tool; be prepared to modify what you are doing as you proceed.
- Always allow time to debrief your use of process and your progress on the task.
- After using any tool, think deliberately about what steps you will take next and what other tool(s) you may need to use.

Steps for Using this Tool

1. State the challenge briefly and clearly. Write it on flip chart paper; the participants may also write it on their SCAMPER worksheets.
2. Pick a letter from the SCAMPER list. State the word it represents and ask, "What new ideas for this challenge might this word suggest?" Encourage the group members to list several possible responses, and write them down on chart paper.
3. Use several probing questions for this word (see the list on page three) to help the group stretch and go beyond their first thoughts.
4. Choose additional letters from the SCAMPER acronym when you sense that the group needs additional prompting or that they have exhausted the possibilities for any given word. Use any or all of the letters, words, and questions.
5. Review the list of options generated by the group to determine if they have met the stated task or challenge.
6. Decide what the next step is in dealing with the challenge.

FEATURE

SCAMPER: Putting Fun Into Idea-Generation

by Karen Meador
San Marcos, Texas



The children scampered about the yard pretending to be animals leaping through the forest. The steps of the porch were imaginary mountains and a door at the top became a cave opening. The driveway was a river to be crossed. As they played, they used rocks as food and playfully nurtured the smallest children as though they were young offspring.

Overview and Description

"SCAMPER: To run playfully about as a child..." (Eberle, 1990, p. 12). The narrative above depicts children who are scampering in their imaginary forest. They substitute real for imaginary, combine actions to create situations, and playfully explore possibilities. We use SCAMPER for all of these things. SCAMPER is an acronym in which the letters stand for cue words used in this tool.

S - Substitute: use something else/ do something instead

C - Combine: put something together

A - Adapt: determine what else something suggests or what we might copy

M - Modify: change the shape, color, or odor

Minify: make it smaller, lower, or shorter

Magnify: make it larger, thicker, or stronger

P - Put to Other Uses: use something

in its original form for another purpose

E - Eliminate: remove something

R - Reverse: turn it upside down, backwards, or switch roles

Rearrange: use another order or transpose components

We use these words to stimulate thoughts when attempting to alter products or to generate solutions and other options. The words help improve the range of possibilities and spur the imagination.

Some of the words in SCAMPER originally appeared in *Applied Imagination* (Osborn, 1963) as an idea-spurring checklist. Bob Eberle (1990) arranged the words as SCAMPER and wrote two books of games for imagination development based upon the tool.

Application

I first used SCAMPER when making a desperate attempt to energize kindergarten students who were generating ideas. I wanted to encourage students to value creativity and to express divergent ideas in a constructive manner, so I asked, "What can you do with a ball?" The youngsters enthusiastically blurted out every game or action they could think of which used a ball. After mentioning the obvious games, students continued with motions

such as bouncing a basketball, throwing a baseball, and so on. I wanted to encourage them to generate more varied answers, so I asked other types of questions based on SCAMPER. I asked a question built on substitution, the word denoted by the S in SCAMPER. "What could you use a ball in place of in our classroom?" I queried. Responses included things like "use it to sit on instead of a chair" and "use it instead of a pillow in the reading corner." Next, I asked, "What could you do with a ball if you cut it in half (M—modify)?" This produced answers including using the ball for a bowl, a crayon holder, and many other things. Students were extremely pleased with these new thoughts and talked about other things they could do to the ball. One of my favorite answers followed the question, "What could you do with a ball if it was as big as our classroom (M—magnify)?" Nathan exclaimed, "You could get inside it and play skateboard!" His comment illustrates that original thinking and unique ideas are benefits of using SCAMPER.

Students enjoy using SCAMPER in a variety of contents, problem-solving episodes, and in conflict resolution, and they eventually make it part of their personal repertoire of tools. It is helpful to provide

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an experimental base by using it for classroom questioning and for guiding activities prior to explaining it to students. The following example of a few SCAMPER-based questions for the story of *Little Red Riding Hood* serves as a model for using the tool in any content.

Combine: What would happen if your pet bear went to Grandmother's house with you?

Put To Other Uses: What else could Red Riding Hood use her basket for when she got to Grandmother's house?

Minify: What things could the wolf do to make his eyes look smaller?

Substitute: Think of yourself as Red Riding Hood. What would you do to the wolf if you had hot chili powder in your basket instead of cookies?

Rearrange: How would the story end if Grandmother went to visit Red Riding Hood and the wolf was in Red's house?

I often guide students as young as first grade to SCAMPER during problem solving. It is easiest to begin with a mechanical problem or a problem requiring a new invention. There are many appropriate household problems which students enjoy tackling, and my classes have been productive when attempting to develop new toothbrushes. Seventh graders told me that brushing your

"Once students have used SCAMPER a few times, they begin to apply it when making choices and decisions..."

teeth is boring and unpleasant. Students suggested changes to the toothbrush, which they generated using SCAMPER. Would you enjoy a toothbrush that hums while you brush, or one that lights up your mouth (M—modify)? Why don't we put that brush to other uses (P) such as combing eyebrows or making annoying noises in class on the bottom of our desks? We could combine (C) the toothbrush with "bubbly, popping toothpaste" to create an exciting, refreshing feeling in our mouths.

Once students have used SCAMPER a few times, they begin to apply it when making choices and decisions such as determining ways to make a project display. We

facilitate spontaneous use of the tool by clearly displaying the acronym and actions it suggests. Bulletin boards or posters help students remember the tool and may be especially useful when pictures or examples are included. Large cards displaying the letters and corresponding words of SCAMPER are helpful to show small groups of students who reach a lull in their brainstorming.

SCAMPER might be used more abstractly when a situation requires conflict resolution. Ask students some of the following questions:

S - Is there anything else you could both use since we only have one ball?

M - How could you each do something differently to resolve this problem?

R - How can you go back to the beginning and correct what went wrong?

Common sense reminds us to use the tool sparingly, watching for students who may lose interest in SCAMPER. Do not feel you must use every letter of SCAMPER each time. Often just a few straightforward questions based on the tool ignite enough imagination to carry thinking forward. You may also want to keep track of which letters of SCAMPER you use; variety is important.



SCAMPER

by Douglas Reid
Scottsdale, Arizona

SCAMPER is a flexible tool which stimulates many different perspectives when solving problems creatively. I apply SCAMPER as a brainstorming "enhancer" and find that it can be used successfully—woven in and applied naturally—in any stage of a problem-solving session. Typically, groups I facilitate enjoy the many directions in which SCAMPER might lead them. Sometimes, it can lead to a significant breakthrough in a group's thinking.

Recently, I was facilitating a group for a large medical company. The group was to come up with ideas for enhancing an existing product, which could help them to "leap frog" their competition. The product was a medical device used by individuals to monitor their own condition. While going over the background information to set up the task, one member of the group mentioned that the medical device provided negative feedback to the user. A group member also noted that children with this medical condition were not very motivated to use the device.

After generating many, varied

ideas for improving the device, I asked, "What if the feedback the user got was positive instead of negative?" (Rearrange? Reverse?) This SCAMPER question led to many new ideas and the group's energy really picked up. A while later, I asked, "What are some ways in which the device could be useful *and* fun at the same time?" (Combine? Adapt? Put to other uses?) Once again, the flow of ideas exploded. The notion of combining music, or a voice message such as an affirmation, really excited the group. The possibility of using the product as both a medical device and a game could be potentially attractive to children.

The two SCAMPER questions I asked during this session ultimately led to a concept that the client wanted to explore further. It combined a positive message for the user with some possibilities of adding a game feature as well. The group members were enthusiastic about the outcome of the session, and they were quite certain that their new idea had the "leap frog" potential they were seeking!

Douglas Reid is a consultant and trainer, and a principal of Douglas Reid & Associates of Scottsdale, Arizona. He was formerly an employee of a multinational information systems corporation.

Try SCAMPER during your own thinking until you feel comfortable with it. Then apply it to your questioning of students, and finally, teach students how to SCAMPER on their own.

The adults watching the children missed the joys of using their own imaginations and soon scampered throughout the forest with the children. After that, the adults seemed to be free and more able to break barriers in their own thinking.

Dr. Karen Meador is Assistant Professor of Curriculum and Instruction at Southwest Texas State University in San Marcos, Texas. She recently joined the editorial advisory panel of THINK™.

References

- Eberle, Robert F. (1989). *SCAMPER On*. East Aurora, NY: D.O.K.
- _____. (1990). *SCAMPER*. Buffalo, NY: D.O.K.
- Esterreicher, C. (1995). *SCAMPER Strategies: FUNDamental Activities for Narrative Development*. Eau Claire, WI: Thinking Publications.
- Osborn, Alex F. (1963). *Applied Imagination* (3rd rev.). New York: Charles Scribner's Sons.

Facilitator's Notes For Form 10, Checklists for Possibilities

The purpose of this form is to use some key words as stimulators or "triggers" for new ideas. Alex Osborn described this as using idea spurring words. Some of those very useful key words were organized using the acronym "SCAMPER," by Bob Eberle in the 1970's. But they're not the only words you might use to help s-t-r-e-t-c-h your thinking, as we've illustrated by also using the word "CREATIVE" as an acronym.

For your problem statement, use either acronym to help you think of some new possibilities. Taking each letter of the acronym, consider the word that's given, and ask, "What new ideas for this problem might this word suggest?" Look for several ideas for each word. List the new possibilities and add them to your idea list.

Tips to encourage effective use of this Form:

- It is not necessary to use the letters/words in order. Feel free to explore any possibilities that might be suggested by any of the words. Sometimes one word might give you several new ideas, and others might not help at all.
- This form can be particularly useful when the group has trouble coming up with ideas, or when all the ideas seem to be very similar (i.e., the group seems to be locked in to one path or direction in its thinking).
- The words given on the form for each letter are certainly not the only words, the "correct," or the "best" words that might be used. Try to think of other possibilities for each letter, and use those words, too.
- Sometimes a word will lead to a quick response or slogan. Write these down. It can be helpful to go back to those and ask the group to expand them or develop them into more complete new possibilities.

Form 10

Checklists for Possibilities

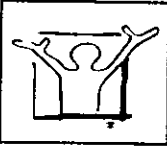
IWWM _____

S Substitute	C Combine	A Adapt	M Modify Magnify Minify	P Put To Other Uses	E Eliminate	R Reverse Rearrange

Try Other Words, Too...

C Connect	R Replace	E Exchange	A Adjust	T Twist	I Invert	V Visualize	E Extend

BRAINSTORMING ENHANCERS



Purpose

Brainstorming Enhancers (SCAMPER and Forced Fitting) energize Brainstorming in order to stimulate the flow of options. Use these tools to:

- Stimulate “breakthrough” thinking;
- Channel the flow of options in new directions; or
- Speed up the flow of options.

Description

SCAMPER and Forced Fitting are tools to help people shift their perspectives and think about things from new directions. Forced Fitting requires an individual to force a relationship between a random object (e.g. a toy) and the task at hand. SCAMPER is a mnemonic device for a menu of thought-provoking questions that can be used to stimulate a shift in thinking. The SCAMPER questions are described on page four.

History

Gordon (1961) used the concept of Forced Fitting to turn wild analogies into feasible solutions. Koestler (1964) examined this notion in his work on “bisociation” – the association of two incompatible frames of reference. Isaksen, Dorval and Treffinger (1994) described Forced Fitting as a tool to force relationships between seemingly unrelated things to stimulate new thinking. SCAMPER stems from the work of Osborn (1953) who developed a series of idea-spurring questions to serve as stimuli for new approaches to solving problems. Bob Eberle (1971) published a book in which he developed the mnemonic device SCAMPER to organize Osborn’s checklist of questions.



References

- Eberle, R. F. (1971). *Scamper games for imagination development*. Buffalo, NY: DOK Publishers.
- Gordon, W. (1961). *Synectics*. New York, NY: Harper & Row.
- Isaksen, S. G., Dorval, K. B., & Treffinger, D. J. (1994). *Creative approaches to problem solving*. Dubuque, IA: Kendall/Hunt Publishing.
- Koestler, A. (1964). *The act of creation*. New York, NY: Macmillan Publishing Co.
- Osborn, A. F. (1953). *Applied imagination*. New York, NY: Scribner's.

Suggested Materials

- Toys or objects for use as Forced Fitting stimuli.
- List of SCAMPER questions in poster or handout format.
- General facilitation supplies (e.g., flipchart, markers, tape, etc.).

Steps for Using Brainstorming Enhancers

1) Focus the Group on the Task

- Write the task so it is visible to the entire group.
- Ask the client to explain the task to the group.
- Have the client answer questions about the topic (if necessary).

2) Review Generating Guidelines

- Establish the guidelines for generating options: Defer Judgment; Freewheel; Seek Combinations; and Strive for Quantity.
- Clarify questions about process or content.

3) Provide an Overview of the Enhancers (if new to the group)

- Clarify the purpose and outcome of the Brainstorming Enhancer used.
- Overview the steps.
- Set a target number of options to generate.
- Answer questions about the Enhancers.

4) Generate Options

- Have all group members call out the options so they can be recorded.
- Push the group for highly unusual options. Encourage them to generate options that are "beyond the obvious."

Using SCAMPER:

- Ask the group a question from the checklist.
- Ask the group to answer the question to generate additional options.
- Use as many questions as necessary to trigger new thinking.

Using Forced Fitting:

- Explain the purpose of using the objects.
- Show the object.
- Use an example to demonstrate how the tool works. Check for clarity.
- Ask the group questions to stimulate their thinking. For example:

"What options does this object trigger in your mind?"

"What does this object make you think of in relation to the task?"

5) Choose Additional Objects or Questions as Necessary

- Use a variety of questions or objects to keep the energy and the interest of the group high.
- Shift to other questions or objects when the generation slows down.

6) Check on Progress

- Get feedback from the client about every 15 - 25 options. For example:
 "Is this going in the right direction?"
 "Are you getting the kind of options you need?" If not, decide what is needed to continue.
- Once the target number is reached, ask the client:
 "Would you like more options?"
 "Do you have enough options to consider?"

7) Take Next Steps

- Examine possible next steps. For example:
 Generate additional options using the same or different tool;
 Focus options;
 Provide time for reflection and incubation; or
 Identify actions to be implemented.

Tips for Using Brainstorming Enhancers

- These tools can be used with either little structure – stimulating or probing questions/objects provided at random by the facilitator during generation; or with much structure – one question or object presented to the group at a time.
- During SCAMPER, post negative options generated using the R ("reverse" or 'rearrange") in a separate place. Reverse these back to the positive to generate additional options.
- Post-its™ can be used to speed up the process.
- Modify or customize your checklist of questions so it works best for you and your group.
- Use exciting or interesting objects to get people's attention.
- Consider leaving objects on the table for the group members to use at any-time.
- The list of SCAMPER questions can be used in any order, sequence, in whole or in part.

SCAMPER

Substitute?

Who else? What else? Other ingredients?
Other material? Other process? Other
power? Other place? Other approach?
Other tone of voice?

Combine?

How about a blend? An alloy? An
assortment? An ensemble? Combine units?
Combine purposes? Combine appeals?
Combine ideas?

Adapt?

What else is like this? What other idea does
this suggest? Does the past offer a parallel?
What could I copy? Whom could I emu-
late?

Modify?

Magnify? What to add? *Minify?* What to
subtract? New twist? Change meaning,
color, motion, sound, order, form, shape?
Greater frequency? Stronger? Longer?
Omit? Streamline? Split up?

Put to other uses?

Could its form, weight, or structure suggest
another use? New ways to use? Other uses
if modified? Change context?

Eliminate?

Suppose we leave this out? Fewer parts?
Condensed? Lower? Shorter? Lighter?
Understate? How can we make less more?
What can we do without?

Rearrange? **R**everse?

Turn it upside down? How about opposites?
Reverse roles? Turn tables? Interchange
components? Other sequence? Change
pace? Change schedule? Transpose cause
and effect?

ALEX OSBORN'S CHECKLIST FOR GENERATING OPTIONS

SCAMPER

- Substitute?** Who else? What else? Other ingredients? Other material?
Other process? Other power? Other place? Other approach?
Other tone of voice?
- Combine?** How about a blend? An alloy? An assortment? An ensemble?
Combine units? Combine purposes? Combine appeals? Combine ideas?
- Adapt?** What else is like this? What other idea does this suggest? Does past offer parallel? What could I copy? Whom could I emulate?
- Modify?** Magnify? What to add? Minify? What to subtract? New twist?
Change meaning, color, motion, sound, order, form, shape? Greater frequency? Stronger? Longer? Omit? Streamline? Split up?
- Put to other uses?** Could its form, weight, or structure suggest another use?
New ways to use? Other uses if modified? Change the context?
- Eliminate?** Suppose we leave this out? Fewer parts? Condensed? Lower?
Shorter? Lighter? Understate? How can we make less more?
What can we do without?
- Rearrange?** Reverse? Turn it upside down? How about opposites? Reverse roles? Turn tables? Interchange components? Other sequence?
Change pace? Change schedule? Transpose cause and effect?

Sources

Osborn, A. F. (1979). *Applied Imagination: Principles and procedures of creative problem-solving*. NY: Scribner's.

Eberle, R. F. (1972). *Scamper: Games for imagination development*. East Aurora, NY: DOK.

SCAMPER



Purpose

SCAMPER is a divergent thinking tool that helps stimulate new options within an existing flow of options. Use this tool:

- To explore new directions for the generation of options.
- When the flow of ideas slows down and needs to be increased.

Description

SCAMPER is a well-recognized tool used to provide on going stimulation and support to groups engaged in generating options. It is a checklist, meant to be used as a “menu” of possible option spurring questions that can be used in any order or combination. Group members can use the checklist by themselves, or the facilitator can ask questions aloud. The SCAMPER checklist:

Substitute?	Who else? What else? Other ingredients? Other material? Other process? Other power? Other place? Other approach? Other tone of voice?
Combine?	How about a blend? An alloy? An assortment? An ensemble? Combine units? Combine purposes? Combine appeals? Combine ideas?
Adapt?	What else is like this? What other idea does this suggest? Does past offer parallel? What could I copy? Whom could I emulate?
Modify?	<i>Magnify?</i> What to add? <i>Minify?</i> What to subtract? New twist? Change meaning, color, motion, sound, order, form, shape? Greater frequency? Stronger? Longer? Omit? Streamline? Split up?
Put to other uses?	Could its form, weight, or structure, suggest another use? New ways to use? Other uses if modified? Change the context?
Eliminate?	Suppose we leave this out? Fewer parts? Condensed? Lower? Shorter? Lighter? Understate? How can we make less more? What can we do without?
Rearrange?	Turn it upside down? How about opposites?
Reverse?	Reverse roles? Turn tables? Interchange components? Other sequence? Change pace? Change schedule? Transpose cause and effect?

History

Osborn (1953) developed a series of idea-spurring questions to serve as stimulus for new approaches to solving problems. Eberle (1971) organized these questions into a simple mnemonic device (memory aid), called SCAMPER.

Eberle, R. F. (1971). *Scamper games for imagination development*. Buffalo, NY: DOK Publishers.

Osborn, A. F. (1953). *Applied imagination*. New York, NY: Schirber's.

Getting Ready

- Have a list of SCAMPER questions ready to use.
- Consider posting the checklist on a flipchart in a clearly visible location.

General Suggestions

- Make sure that, when negative options are generated through ‘reverse’, the options are ‘reversed’ back to the positive.
- Keep negative options ,that are used as springboards, posted on a location separate from the options that are dealing with the task.
- Modify or customize your checklist of questions the way it works best for you.

Steps for SCAMPER

1) State and Clarify the Challenge

- Write down the statement of the challenge that is to be addressed, so that the entire group can see it.

2) Review guidelines for divergent thinking

Defer judgment
Freewheel
Seek combinations
Strive for quantity.

3) Select question from the checklist to stimulate new options

- Use the tool within the flow or concept of another divergent tool, like Brainstorming, Brainstorming with Post-its™, or Brainwriting (See Tool Booklets).
- Select and say out aloud a question from the checklist on the other side of this Tool Booklet.
- Some example questions:

“What can we substitute in the challenge to help generate new options?”

“How can we modify the task?”

“What can we adapt from parallel situations?”

3) Have group generate options stimulated by the question

- Have the group members (including the client) call out their options one at a time so that the recorder can capture all of the options. Or have the group members capture their options on Post-its™ (See Brainstorming with Post-its™ Tool-Booklet).

4) Push group to get non-literal options

- To lift the flow from literal reactions or play on words, use questions like:

“What does that suggest for our challenge?”

“How might that take our thinking in a new direction?”

5) Repeat several times

- Any sequence or combination of questions can be used to spur new options.
- Use a variety of questions, since some work better than others. Quickly go to a new question when the current one does not seem to work.

6) Check-in with client

- Ask the client what would be the preferred next steps to take.

7) Take next steps

- Take next steps, considering the needs of the client and the group dynamics.

5. When you have written down three ideas, place the form in the middle of the table. Pick up a form someone else has completed. (Do not continue on the form you just used.) Wait for one whose last three ideas are not your own. The first person to place the form in the middle of the table should pick up and use the extra blank form.
6. Three more ideas are now written down across the second row (Idea A, B, and C). These can be new ideas or ideas stimulated by those already written down. These ideas can also be additions to, or combinations of, previous ideas.
7. Proceed as in steps 4, 5, and 6.

Notice in Figure 7.5, that the ideas generated in the columns on the form build upon previously written ideas as they progress down the worksheet.

Idea Checklists: SCAMPER

Osborn (1979) proposed that a series of idea-spurring questions could be very helpful for stimulating new ideas, within an individual's mind or among the members of a group. These questions can be posed mentally on one's own, or by a group facilitator or another person, to serve as "triggers" or "jumping off points" for other new ideas for anyone in the group. It is not necessary to use all the questions, nor to pose them in any fixed or prescribed sequence. Not all of the questions will necessarily be helpful for every group or situation. Any of the questions might be the source of a new idea or inspiration that hadn't occurred before!

Eberle (1971) began with Osborn's list of questions, and reorganized them to provide a simple mnemonic device (or memory aid), which may help you to remember some of the key words and the questions associated with each one. Just remember the word, "SCAMPER." Each of the letters stands for one of the key words, and its idea-spurring questions, in the following list:

- Substitute?** Who else? What else? Other ingredients? Other material? Other process? Other power? Other place? Other approach? Other tone of voice?
- Combine?** How about a blend? An alloy? An assortment? An ensemble? Combine units? Combine purposes? Combine appeals? Combine ideas?
- Adapt?** What else is like this? What other idea does this suggest? Does past offer parallel? What could I copy? Whom could I emulate?
- Modify?** *Magnify?* What to add? *Minify?* What to subtract? New twist? Change meaning, color, motion, sound, order, form, shape? Greater frequency? Stronger? Longer? Omit? Streamline? Split up?
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The questions organized by SCAMPER can be used in any order, sequence or combination. Use the list as a

SCAMPER	
STATEMENT:	<i>How to control Vernon more effectively?</i>
Substitute?	<i>Use other kinds of restraints (e.g., electronic or audio—high pitch sound, laser or light beam)</i>
Combine?	<i>Use tranquilizers and visual images</i>
Adapt?	<i>Change his diet so he's listless and docile? Use behavior modification to make him a leader</i>
Modify?	<i>Magnify—get guards who make Vernon look small and wimpy; put Vernon in a bigger cell, with huge furniture in it; use some kind of "body wrap" restraining coat Minify—use a small object to surprise and control him (mace? stun gun?)</i>
Put to other uses?	<i>Make Vernon the wrestling coach? Get him to start a Sumo team?</i>
Eliminate?	<i>The prison—put him on a desert island, with shark-infested water—airlift supplies</i>
Rearrange? Reverse?	<i>Make him the guard within a special security block; Keep changing his hours and schedule until he gets confused?</i>

Adapted from Eberle, B. (1971). *Scamper*. Buffalo, NY: DOK Publishers.

VERNON CASE STUDY

Figure 7.6. An example of SCAMPER.

“menu” of questions to choose from when you need to stimulate your idea flow. Figure 7.6 demonstrates SCAMPER used for the Vernon Case Study.

Forcing Relationships

There are also a number of techniques to help you generate ideas that are unusual, original, or high in novelty by attaining greater “stretch” or “distance” from one’s initial approach or ideas. These techniques involve *forcing* yourself to move in new or more unusual direc-

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